

USE OF THE MAGNETOACOUSTIC RESONANCE IN PLASMA CHEMISTRY
FOR ELECTRON HEATING

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Abstract

Magnetoacoustic resonance in a slightly ionized chemically active plasma is considered. It is shown that the electron component of the plasma is heated up to a few electron volts at rather low power outputs of an RF generator. When the energies are of the order of the dissociation energy the electron distribution function takes a pronounced non-Maxwellian form with sharply cut-off tail. The concentration of the molecules in the flux may reach 10^{16}cm^{-3} in this case the electrons provide essentially complete dissociation of the molecules.